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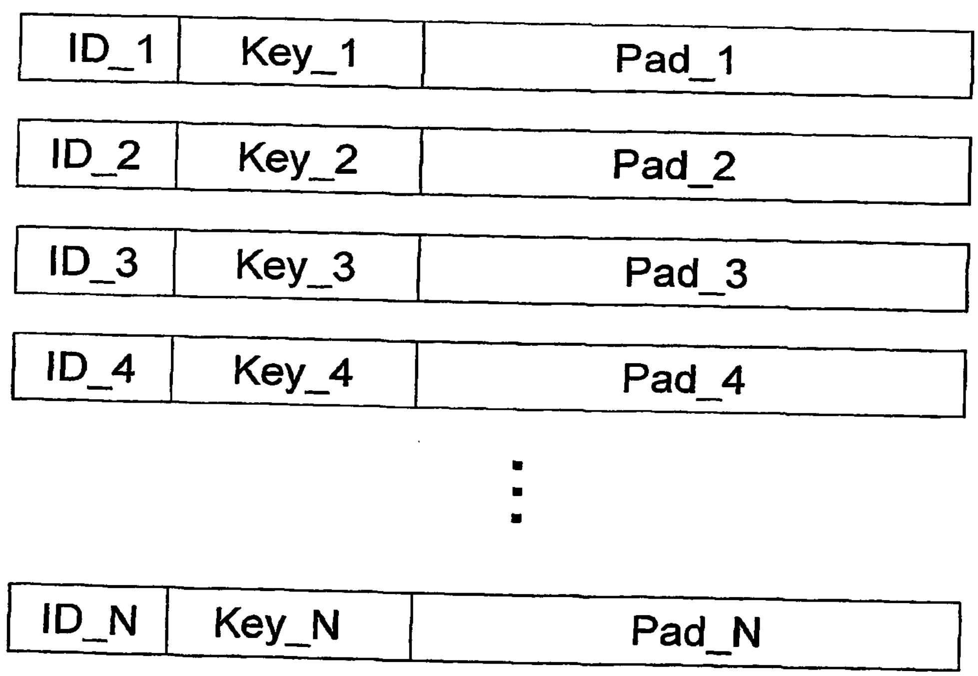
(54) Title: KEY EXPANSION FOR QKD



(57) Abstract: A method of encrypting information using an encryption pad based on keys exchanged between quantum key distribution (QKD) stations is disclosed. The method includes establishing raw keys between two stations using QKD, processing the keys to establish a plurality of matching privacy amplified keys at each station and buffering the keys in a shared key schedule. The method also includes the option of expanding one or more of the keys in the shared key schedule using a stream cipher to create a supply of expanded keys that serve as pads for one-time-pad encryption.

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